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AIR UNIVERSITY

TRANSFORMATION OF POLISH AIR FORCES:
WHAT IS REQUIRED TO MEET NATO OBLIGATIONS

by

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A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

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Preface

The genesis of this paper began last year. My extensive participation in many NATO exercises in Poland and visits to other NATO countries gave me the idea for this project. Additionally, I met many NATO officers who had questions about how Poland is changing its post-Cold War Air Forces to meet NATO requirements. All of this influenced my thinking about the subject. I took advantage of the opportunity to write about this issue during my time as a student of the USAF Air Command and Staff College at Air University, Maxwell AFB, Alabama.

I would like to gratefully acknowledge the assistance of my Faculty Research Advisor, Lt Col Marshall G. Cobb, during this project. The inputs, advice, and guidance he provided during my work on the project were priceless. I also thank my friends and colleagues for their comments, help, and discussions during the writing of the paper.

Abstract

After the collapse of the Warsaw Pact, Poland started a major revision of its security and defense thinking. The main goal for Polish security established in the “Security Policy and Defense Strategy of the Republic of Poland” of 1992 was clearly identified to be “Poland is striving towards NATO membership.”¹ The eight-year Polish effort to gain acceptance to join NATO finally succeeded on March 12, 1999. It fulfilled many years of preparation and searching for a new security environment. Despite the fact that some of the changes were done before entering NATO, Poland still needs to complete its integration with the NATO Alliance. Poland still possesses equipment and a command structure reflecting its former Warsaw Pact alliance requirements. This paper will attempt to focus on the transformation of the Polish Air Force and requirements, which must be accomplished to obtain NATO membership. Poland should accelerate these efforts to attain full NATO compatibility and interoperability. The purpose of the paper is to define areas in which Poland should concentrate its efforts to meet NATO obligations.

Notes

¹ Paul Latawski, *The Transformation of the Polish Armed Forces: Preparing for NATO*, Royal United Services Institute for Defense Studies, London 1999, p. 11.

Chapter 1

Introduction

The breakdown of the Soviet Union was the consequence of international contradictions and failures of the Soviet system.¹ In 1990, Gorbachev declared an end to the Cold War and signaled to countries such as Poland, the Czech Republic, and Hungary that the Soviet Union would not stand in the way of political change.² Some time later, President Clinton's administration presented a number of basic motivations for NATO expansion, consistently emphasizing the importance of consolidating democratic and market gains in Eastern and Central Europe, and building an expanded Western democratic community.³ As a new democracy, Poland saw NATO as a way to establish an unbreakable tie to Europe and the West.⁴ Joining NATO could guarantee the security of the nation that had often been sacrificed to great power politics in the past, and it might extend Europe's zone of peace and prosperity from the west to the east.

The political leaders of Poland viewed NATO as an institution of shared interests (protection against a common threat) and as an institution of shared values (promotion of democracy and peaceful relations between the members). The related sense of security and the prospect of membership in NATO encouraged the government of Poland to pursue domestic reforms in advance of truly joining the alliance. To gain NATO membership, a candidate country is obliged to engage in required institutional reforms.

In Poland, certain steps were specified by NATO as a necessary introduction to the alliance: democratic institutions, progress toward a market economy, armed forces in civilian hands, settled territorial borders, and movement toward interoperability with NATO forces. NATO's assistance helped Poland a great deal. At the beginning of the transition process in Poland, the new democratic government was so fragile that the ex-communists were likely to gain power again. The NATO countries helped Poland succeed in carrying out reforms, which had a huge effect on the domestic situation as well as on the rest of the region.

Additionally, the decision taken by NATO to include Poland in its defense structure had a number of military advantages. Poland is one of the three new NATO members with the Czech Republic, and Hungary, that have been making a serious effort to meet NATO standards.⁵ There is no question that Poland's military is as outdated as that of the other two countries. The difference, however, is that despite its financial problems, Poland has made a serious effort to upgrade its force structure and doctrine. In 1990 and 1992, the Polish government published "doctrinal" texts setting out the security and defense policy of Poland, their view of potential threats, and the new purposes and tasks of the armed forces.⁶ Furthermore, in 1998, Warsaw adopted the "Program for Integration into the North Atlantic Treaty Organization and Modernization of the Polish Armed Forces 1998-2012."⁷ This plan provided a strategy for integrating Poland into NATO.

While Poland has begun to carry out the plan's goals, it still needs to continue its reorganization to achieve NATO obligations. In spite of equipment improvements, Poland must create a command and control system reflecting NATO expectations and

standards. Implementation of the system will also help in training command post personnel and pilots according to NATO standards and procedures. The training could be accomplished over Polish territory, a cheaper option than having to obtain NATO-compatible training in other country. The next issue that Poland must expedite is implementation of a new aircraft for its Air Force. Recently, Poland has upgraded its MiG-29 aircraft, which are Poland's most advanced fighters, and its Su-22 fighter-bombers. However, the fact that the MiG-21s should be retired in a year, or a maximum of two years, will have a large impact on the Polish Air Defense System and Polish security issues. The current number of 22 MiG-29s are not able to cover broad-spectrum tasks that the fighters must face to fulfil the Polish Air Defense System and the Alliance role. In summary, Poland needs to expedite its Air Force reforms to get the Polish Air and Air Defense Forces (PAADF) to a level that will satisfy NATO compatibility and interoperability standards and let Poland fulfil its Alliance obligations.

Notes

¹ G. John Ikenberry, *After Victory*, Princeton Studies in International History and Politics, Princeton University Press, New Jersey 2001, p. 216

² Ibid, p. 219.

³ Ibid, p. 236.

⁴ Ibid.

⁵ Susan Eisenhower, *NATO at Fifty*, The Center for Political and Strategic Studies, Washington D.C., 1998, p. 153.

⁶ Paul Latawski, *The Transformation of the Polish Armed Forces: Preparing for NATO*, Royal United Services Institute for Defense Studies, London 1999, p. 11.

⁷ Ibid, p. 38.

Chapter 2

Polish Doctrine During the Transition

In becoming a member of the Atlantic community, Poland is determined to uphold the Alliance's effectiveness. A stable country with a dynamic and growing economy, Poland is a land free of conflicts with its neighbors. It has completed its democratic transformation, contributes actively and constructively to peaceful international relations and will in future be a member of the European Union. And, no less significantly, Poland possesses a substantial military potential.

—Aleksander Kwasniewski¹

In 1990 and 1992, the Polish government published “doctrinal” texts setting out the security and defense policy of Poland, their view of potential threats, and the new purposes and tasks of the armed forces.² This doctrine on Polish security and defense policy were the basis for further Polish security considerations. In 1998, Warsaw adopted the “Program for Integration into the North Atlantic Treaty Organization and Modernization of the Polish Armed Forces 1998-2012,”³ which took a long-term approach. Later, on 6 March 2001, the government adopted the *Project of Technical Reorganization, Modernization and funding of the Armed Forces of the Republic of Poland in years 2001-2006*,⁴ which provided a short-term option.

The Basis of Polish Security Policy

Since the end of the Cold War and the breakup of the former Soviet Union, Polish hopes for a new, more integrated Europe rested with increased Eastern European ties with the North Atlantic Treaty Organization. NATO expansion extended the area of democracy and stability in Europe. Poland had to establish its own objectives and principles of national security in alignment with NATO security issues. According to the Polish Ministry of Defense (MOD), Poland's **national security policy objectives** are:

- To guarantee the independence, sovereignty, and territorial integrity of the country, and infrangibility of its borders;
- To guarantee security of the democratic constitutional order, in particular, all human rights and liberties, and the safety of the citizen of Republic of Poland;
- To establish the best possible conditions for comprehensive and stable social and economic development of the country, the prosperity of its citizens, for maintenance of the national heritage, and the development of the national identity;
- To contribute to the development of a stable, fair, and peaceful order in Europe and throughout the world, based on the principles of democracy, human rights, law, and solidarity.

The Principles of Polish Security Policy:

- Poland treats security in a complex way, allowing for the importance and influence of a variety of political, military, economic, social, and environmental and energy factors;

- Poland implements its security policy according to the Constitution of the Republic of Poland, with respect to international law, according to the objectives and principles of the Charter of the United Nations and documents of the Organization for Security and Cooperation in Europe (OSCE), and according to the spirit and letter of international treaties and conventions to which it is a party. Treating its borders as inviolable, Poland has no territorial claim beyond its current borders and has relations regulated by treaties with all its neighbors. Poland does not intend to strengthen its own security at the expense of security of others;
- In its activities in the arena of international politics, Poland follows the values, ideas, and principles included in the North Atlantic Treaty and European Treaties, in order to realize the vision of a free and democratic Europe where security, prosperity, and favorable conditions for cultural development and the maintenance of national identity constitute the common and indivisible good for uniting the continent;
- Poland strictly connects its security with the security of NATO countries and members of the European Community. Poland fulfils its own security interests mostly within the framework of the North Atlantic Treaty Alliance system of cooperation and solidarity, by supporting international efforts aimed to strengthen security in Europe and throughout the world, and to protect basic human rights;
- Poland supports the idea that the use of force in the international arena should be limited exclusively to exercising the right of self-defense, as provided in the

Charter of the United Nations, or in the context of operations carried out on the basis of an international community mandate. This results from a desire to live in peace with all nations and to solve any disputes with the use of international peaceful means. At the same time, Poland is willing to strongly oppose all those who show aggression and violate the human rights.⁵

In 1992, Poland's membership in the NATO was declared a strategic goal of Polish security policy. In 1990, and again in 1992, the Committee of State Defense published two major documents embodying changes to the Polish defense doctrine. The first, the "Defense Doctrine of the Polish Republic," came out in spring 1990 and the second, the "Security Policy and Defense Strategy of the Republic of Poland," was officially adopted in November 1992.⁶ These two documents provided the first revision effort of the post-Cold War era and a new point of view on the security considerations of the new political order.

"Armed Forces 2012"

The Polish Armed Forces started their preparation for NATO membership in 1990. An important event was their participation in NATO's "Partnership for Peace" (PfP) program, launched in 1994.⁷ The PfP program is designed to prepare future member countries' armed forces to join NATO. During combined exercise training, operating procedures for peace support and crisis management operations were planned and executed in combined training exercises.⁸ From 1998 to 2002, Poland started to develop its Armed Forces where the priority was to achieve NATO standard compatibility and interoperability. Finally, the Ministry of Defense prepared another program of technical modernization for the Armed Forces, *Program for Integration into the North Atlantic*

Treaty Organization and Modernization of the Polish Armed Forces 1998-2012. This program, also called *Armed Forces 2012*, called for reducing the number of forces, listed interoperability concerns, noted the command system adjustment process, and proposed a concept of the Air Defense System based on the interoperability requirements.⁹

Armed Forces 2012 says that the defense budget will increase at the same rate as the state budget and in the first five years the part devoted for purchasing military equipment should reach a rate 3% higher than the state budget.¹⁰ This initiative also established the need for developing a multi-role fighter (MRF). However, it will be very difficult to find \$3 billion for the MRF program, when the Polish economy has just slowed down.¹¹

Project of Technical Reorganization, Modernization and Funding of the Armed Forces of the Republic of Poland in Years 2001-2006

On March 6, 2001, the government established the *Project of Technical Reorganization, Modernization and funding of the Armed Forces of the Republic of Poland in years 2001-2006*. According to this program, the most important modernization elements are:

- MOD budget not less than 1.95% GDP;
- Reducing the Armed Forces from 206,000 to 150,000 by the end of 2003;
- Financing the most important projects of modernization and research only;
- Withdrawing from service ineffective and obsolete military equipment;
- Liquidating useless garrisons;
- Reorganizing the structure of the Armed Forces.¹²

On this schedule, one-third of the Polish Armed Forces should attain interoperability with our new NATO allies by 2003. The program also established a

long-term solution for PAADF, which includes the modernization of the Air Defense System and development of a new aircraft program. However, the program does not include any estimated financing for the MRF program, despite the fact that all MiG-21s should be out of service by 2006. In order to meet NATO standards, the PAADF should have 60 MRFs and modernize the 22 MiG-29s and 78 Su-22s still in service. According to the modernization program, in the years 2001-2005, the structure of PAADF should be as follows:

- PAADF Headquarters;
- Combined Air Operation Center;
- Two Air Defense Corps with ten squadrons of tactical aviation, 25 SAM units and radiotechnical and support units.
- To create four Osrodkow Dowodzenia I Naprowadzania (ODN) and after they achieve operational readiness, the Corps level of command and control will be abolished.¹³

Thus, according to these programs, we have long and short-term approaches where we could adapt our Command and Control System to NATO requirements and obligations. The second step, which should be taken simultaneously, is a new MRF program of purchase for the PAADF. Some scholars think that these two initiatives might be the last chance for the Polish Armed Forces.¹⁴

Notes

¹ Aleksander Kwasniewski, "Poland in NATO-Opportunities and Challenges", *NATO Review*, September-October 1997, p.7.

² Paul Latawski, *The Transformation of the Polish Armed Forces: Preparing for NATO*, Royal United Services Institute for Defense Studies, London 1999, p. 11.

³ Ibid, p. 38.

Notes

⁴ Jarosław Cieslak, *Ostatnia Szansa Wojska Polskiego, program przebudowy o modernizacji technicznej sił zbrojnych RP w latach 2001-2006*. Nowa Technika Wojskowa, June, 2001, p.10.

⁵ Republic of Poland Ministry of Defense. *Polish Defense Policy*, 2001, n.p.; on-line, Internet, 4 December 2001, available from www.wp.mil.pl/bezpieczenstwo/3_n.htm.

⁶ Paul Latawski, *The Transformation of the Polish Armed Forces: Preparing for NATO*, Royal United Services Institute for Defense Studies, London 1999, p. 11.

⁷ Jerzy Kropiwnicki, "Government Center for Strategic Studies. (Poland's accession into NATO)", *NATO's Sixteen Nations*, Special Issue 2, 1998, p. 17.

⁸ Lech Konopka, *Lotnictwo Wojskowe III Rzeczypospolitej*, Redakcja Czasopism Wojsk Lotniczych I Obrony Powietrznej, Poznań, 2000, p. 51-52.

⁹ Longin Pastusiak, "Poland on Her Way to NATO", *European Security*, Vol. 7, No 2, Summer 1998, p. 57-58.

¹⁰ Jerzy Kropiwnicki, "Government Center for Strategic Studies. (Poland's accession into NATO)", *NATO's Sixteen Nations*, Special Issue 2, 1998, p. 19.

¹¹ Amy McAuliffe, "Poland, trying to punch above its weight class in NATO", *Journal of Slavic Military Studies*. Vol. 13, No. 4, December 2000, p.10.

¹² Jarosław Cieslak, *Ostatnia Szansa Wojska Polskiego, program przebudowy o modernizacji technicznej sił zbrojnych RP w latach 2001-2006*, Nowa Technika Wojskowa, June, 2001, p.10.

¹³ Ibid, p.12.

¹⁴ Ibid.

Chapter 3

Command and Control Considerations

In order to more effectively to achieve the objectives of this Treaty, the Parties, separately and jointly, by means of continuous and effective self-help and mutual aid, will maintain and develop their individual and collective capacity to resist armed attack.¹

—Article 3 The North Atlantic Treaty

Poland has met many of NATO's interoperability objectives, including command and management, the operation and tactics of individual services, logistics, air navigation and control procedures, and airfield infrastructure and engineering support to meet NATO requirements.² The Polish Armed Forces (PAF) are the instrument of defense and define security policy according to the Constitution. The PAF serves to protect both the independence and the indivisibility of the territory of Poland. Its task results from the National Security Strategy and is specified in both national and allied plans of crisis reaction and defense. According to the MOD, the Armed Forces of the Republic of Poland acting both within the national defense systems and within the NATO Alliance are prepared to perform three strategic tasks:

- Defensive - to repulse direct aggression against Poland or against another allied country;
- Crisis reaction - to include participation in international organizations' missions;
- Stabilization and preventive – during peacetime.³

Based on these broad responsibilities, and according to Maj. Gen. Lech Konopka, the former Chief of Staff of the PAADF, the Polish Air and Air Defense Forces will be required to conduct a broad spectrum of tasks. In peacetime the PAADF:

- Conducts “Air Policing,” reconnaissance and surveillance over Poland’s territory to prevent airspace violations;
- Supports and controls the National Search and Rescue System;
- Takes part in monitoring neighboring countries’ armed forces to obtain necessary warning time of possible hostile actions;
- Controls training of subordinate assets during current operations and exercises;
- Assigns selected forces to NATO peace support operations outside Poland’s territory.

During crisis:

- Increases level of operational readiness and conducts defensive readiness activities in accordance with political leadership decisions;
- Prepares to support NATO reinforcement forces within the framework of preplanned crisis management actions;
- Conducts CAOC typical function;
- Conducts reconnaissance and airspace surveillance over Poland’s territory;
- Shifts to the appropriate readiness level;
- Controls operations directed by political and military authorities, e.g. a show of force;

During conflict or wartime:

- Commands and controls attached air assets;
- Conducts reconnaissance and airspace surveillance over Poland’s territory;
- Counters air operations;

- Interdicts the battle area;
- Provides offensive air support for the ground troops;
- Provides tactical air support for maritime forces operations;
- Plans combat actions required for self-defense against potential adversaries.⁴

The Post-Cold Era Legacy

Since the Warsaw Pact was dissolved on April 1, 1991, the PAF, including the air forces, has tried to find an answer for the question of how to adapt to the new role of a fully independent state. The initial concern was to identify what was left from the past and how to transform these forces for new alliance requirements. In the Warsaw Pact, air, air defense, land, and navy forces were independent services. These included two separate and distinct air forces. The Frontal Air Forces were designed for air defense and support of the ground forces during crisis or wartime. The Air Defense Forces' main task was to protect industrialized and administration centers and forces deployed in Poland. Both of these organizations were combined later in 1991 into the Polish Air and Air Defense Forces (PAADF).

PAADF's Surveillance, Commanding and Control (SC2) System was based on radar posts and fighter aviation. The Warsaw Fortified Central Command Post (CCP) provided overall control for the SC2 system. All the Country Air Defense Corps had their own main and alternate command posts and exercised OPCON over deployed forces in the area of responsibility (AOR). Tactical control of attached forces was to be executed by Joint Tactical Command Posts (JTCPs), based on the Radar Surveillance Battalions. JTCPs were subordinate to the Air Defense Corps. TACON was exercised from JTCPs and targets were selected to be engaged by SAMs and/or fighters units. This system was

based on 1960s and 1970s systems considerations and requires changes to meet new alliance obligations. The most important of these obligations being compatibility and interoperability.

“One of the most important challenges facing the Polish Air and Air Defense will be the modernization of equipment, such as IFF and communications and navigation systems, to conform to NATO requirements.”⁵

The NATO Alliance

The Polish Air and Air Defense Forces are assigned to protect the air space of the Republic of Poland. The C2 system is integrated with the NATO air defense system and maintains continuous readiness to combat any acts of violation of the air system, to stop possible air aggression and weaken its resources. During a crisis or war, the Polish Air and Air Defense Forces also support the Land Forces and the Navy.⁶ However the integration with NATO has not been finished and requires additional steps to achieve full NATO requirements.

In terms of equipment, priority was to be given to obtain a computerized electronic communication system of command and recognition and the most advanced radar system. Poland is within the AOR of the Allied Forces North Europe Command and the Commander Allied Air Forces North (COMAIRNORTH). COMAIRNORTH will exercise OPCON as regional air commander through combined air operation centers (CAOCs).⁷

The precondition for integration of selected Air and Air Defense Forces within NATO is full interoperability, thus enabling the accomplishment of missions resulting from Poland's defense doctrine and allied obligations under Article III of the *Washington*

Treaty. One of the basic conditions for PAADF interoperability goals is adjusting command and control systems to NATO standards and integrating them with the command and control systems of NATO members. Poland has just set up a single intelligence and command system for air defense compatible to the NATO Integrated Air Defense System, including a National Air Support Operation Center (ASOC). Reduction of the number of command and control levels seems to increase system speed and mobility.⁸ If we compare the Command and Control Systems in Poland and NATO (Appendix A), we can see that NATO does not include anything resembling the level of Air Defense Corps (ADC), rather the CAOC has TACON over units. The NATO C2 structure gives better information flow and clearer command and control authority over attached forces.

According to Article III, every country is responsible for developing and upgrading its self-defense capabilities. Thus, Poland has been forced to create a new National Air Defense System. According to Brig. Gen. (Ret.) Jozef Dziechciarz, the Former Chief of Staff of the PAADF, Poland should consider three variants of probable actions that might be taken in Poland's territory:

- (1st variant) The Polish Armed Forces and the PAADF conduct independent operations over Polish territory. This most likely during the beginning phase of a conflict;
- (2nd variant) Conflict or war with full engagement of the NATO forces in Polish territory. The PAADF, except logistics, are under NATO command;

- (3rd variant) In Polish territory, NATO conducts combined operations with limited Polish participation and the rest of Polish forces remain under national command.⁹

According to these variants, the Air Operation Directive (AOD) and Airspace Control Order (ACO) would be issued by AIRNORTH (Variant 2 and 3) or by the PAADF HQ (Variant 1). However, as operations are conducted over Polish territory, the Air Tasking Orders (ATOs) and Air Tasking Messages (ATMs) would be issued at the Centrum Operacji Powietrznych (COP-analogous to the NATO CAOC) in all three circumstances (Appendix B). The shorter the system, the faster information will flow. According to Brig. Gen. (Ret.) Jozef Dziechciarz, the current model of a Command and Control System should possess two subsystems:

- First, the Operational Command and Control System: Centrum Operacji Powietrznych, Osrodek Dowodzenia I Naprowadzania (ODN-analogous to NATO Control and Reporting Center, CRC), Wing Operation Center (WOC), Squadron Operation Center (SOC) and Surface to Air Missiles Operation Center (SAMOC). While critical during crisis and/or wartime, the same system could be used for training purposes during peacetime operations ;
- Second, the level beyond Operational Command and Control, including the PAADF HQ, Air Defense Corps HQs, and Air Base Command Posts. These levels are responsible to train, logistically support, and sustain forces during peacetime.¹⁰

Based on this design, the operational command and control system would consist of the COP, ODN, WOC, SOC, and SAMOC. The other command posts would have only a

supporting and sustainment role in the operational system, except for the PAADF HQ where the AOD would be issued (Appendix B).

In the current Polish Air and Air Defense Forces Organizational Structure (Appendix C), Poland possesses two Air Defense Corps which have subordinate units to include SAM brigades, air bases, and support units. Moreover, every Air Defense Corps has one Tactical Air Brigade (TAB) which has strike (equipped with Su-22) and fighters (MiG-21 and MiG-29) squadrons. However, Poland has only one MiG-29 squadron in Minsk Mazowiecki, the 1st Tactical Air Squadron (TAS), which is attached to the 2nd Air Defense Corps (2ADC). At the end of the 1990s, actions were taken to reach the final preplanned organizational structure where TABs and TASs were created to meet NATO organizational similarity. The squadrons were created from existing regiments. Each regiment was split into one TAS and one air base. According to the Organizational Structure (Appendix D), the Commander in Chief of the PAADF conducts command from the Central Command Post (CCP) through the ADC. However, the commander of the ADC exercises command through the Joint Tactical Command Post (similar to the NATO CRC), and the Air Base Command Post, the TAB WOC (which are just being created), and the SOCs. All these efforts are being made in order to fit the previous PAADF system into an organizational design paralleling NATO structures. The previous PAADF CCP that prepared for wartime operations is no longer the same command and control center and will have to fulfil tactical control functions now. On the basis of that CCP, the Centrum Operacji Powietrznych is being organized.¹¹

Appendix A shows the comparison of Command and Control levels in Poland and NATO. As can be seen in this chart, no operational-tactical level like the PAADF ADC

exists in the NATO C2 structure. However, according to the *Project of Technical Reorganization, Modernization and funding of the Armed Forces of the Republic of Poland in years 2001-2006*, the government wants to create four ODN and to integrate them (two each) in the ADC.¹² Moreover, the ODNs will possess tactical control of units. Therefore, the Corps level of command and control, i.e. ADC, would be abolished.¹³ The ODN control centers will not conduct planning and organization of air operations, but will be focused on providing control of air asset employment. Furthermore, it was decided that radar forces along with their organic communication units would be responsible for operational and tactical control providing air surveillance and an integrated air picture for command centers and communication with forces during current operations.¹⁴ This structure would let the PAADF attain compatibility with NATO standards and requirements.

According to these changes, the C2 System should look like that shown in Appendix B. The AOD will be issued at PAADF HQ, which will possess OPCON over attached assets, and the COP will distribute ATOs. Therefore, the COP will exercise TACON over air assets and will be able to command and control these assets to accomplish missions. However, the most important problem in meeting NATO requirements and obligations is the TAB position in the C2 System.

At the end of the 1990s, the TABs replaced the strike divisions, which had the tools to exercise command and control in their possession. Furthermore, the divisions had only strike assets while air defense fighters were attached to Air Defense Corps. While the TABs have both strike and fighter assets, they do not have any command and control tools. Thus, the C2 exercised by the brigades is problematic. The issue is what options

would be most appropriate to fulfil NATO obligations and the national interest. If the COP is supposed to issue ATOs, then one must question exactly what task will the TABs perform in the C2 System. The shorter the system, the faster the information flow. Moreover, the ATO is issued directly to the units. The role of the TAB in the decision making process is virtually nil. All decisions for using air assets are made at COP level. Below that is only task execution.

The TAB role is important during peacetime, something akin to the American concept of ADCON, but it is not useful during crisis and/or wartime. Moreover, the reason is very simple. The TAB has TACON over squadrons placed in many places in northern or southern Poland, depending on the Air Defense Corps attachment. Lack of any command and control tools causes the system to be ineffective and insufficient in the NATO environment. However, we can model the Germans' system where the organizational administration, training, and logistics support is conducted by divisional organizational structures. However, operational control during crisis and/or wartime is based on NATO's CAOCs deployed in Germany. Poland can follow this model where the TAB staffs should reinforce the C2 System Posts and would not exist in the C2 System during crisis and wartime. Therefore, the ATO should be issued directly from COP-CAOC to SOC, and ODN-CRC (Appendix E).

In my opinion, this solution would let us meet NATO expectations and obligations and achieve complete compatibility and interoperability. In this structure, the COP will be the essential execution element for PAADF HQ to command and control air assets both during offensive and defensive counter air operations. Simultaneously, the COP could delegate TACON to subordinate posts like the ODN. In this situation, the task

would go from AIRNORTH, working with the PAADF, and through the COP, to the ODN, which would execute TACON during combat activities and mission execution. During peacetime, the ODN would be responsible for conducting air surveillance over Polish territory and the “air policing” mission, using Quick Reaction Alert (QRA) fighters subordinate to NATO’s CAOC 2 in Kalkar (Germany) with COP support. Furthermore, we need to familiarize command and control post personnel with NATO operational and tactical procedures and fundamental rules for command.

To summarize, the future Polish Command and Control System must be an integral part of the NATO Command and Control System. The system and procedures must be the same among all alliance members. For that reason, the Polish C2 System must reorganize to meet NATO requirements, expectations, and obligations.

Apart from integration of the procedures, communication and information systems, organizational structures and facilities, Poland’s military equipment, especially its aircraft, is getting to be outdated. The new MRF aircraft under consideration for PAADF is essential and crucial to meet NATO standards, requirements, and obligations.

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Chapter 4

Poland: A Day before Buying A New Aircraft for Its Air Forces

Prepared for worse is prepared for better.

—Anonymous

Poland must expedite implementation of a new aircraft for its Air Forces. Poland has just accomplished an upgrade of its MiG-29 aircraft, which are Poland's most advanced fighters, and its fighter-bombers, the Su-22. Poland now possesses 140 MiG-21s, 99 Su-22s, and 22 MiG-29s.¹ The MiG-21 fighters should be retired in a year, or a maximum of two. As a result, Poland will possess only 22 MiG-29s. These 22 MiG-29s (18 combat capable because 4 are two-seaters) are not able to cover the broad spectrum of tasks necessary to fulfil Polish Air Defense System requirements and Alliance goals. This decreasing number of fighters will have a large impact on the Polish Air Defense System and Polish security issues. Poland must fulfil the gap by buying a new MRF that would let it meet NATO obligations, and positively impact Poland's security issues. In summary, Poland needs to expedite contracts for buying a new MRF for its Air Forces to get the PAADF to a level that will satisfy NATO's compatibility and interoperability standards and let Poland fulfil its alliance obligations.

Post Warsaw Pact Equipment

Poland still possesses post-Cold War era Soviet equipment, which needs to be exchanged or, at a minimum, upgraded. However, an upgrade does not change the fact that the armaments and weapons systems are from the former Warsaw Pact and, very often, do not have equivalents in the Western countries of NATO. Thus, Polish participation in NATO operations is getting to be problematic. The Alliance expects the Polish Air Force to use upgraded Soviet aircraft to provide the air defense over Poland.

“Since the adoption of the 1991 Strategic Concept NATO and its members have been transforming their military forces from the large in-place formations of the Cold War to smaller, more flexible forces which can be force packaged to support NATO’s crisis management strategy. NATO’s military forces are now divided into three categories-Reaction Forces, Main Defense Forces and Augmentation Forces-each comprising maritime, ground and air components. Reaction Forces are subdivided into Immediate Reaction Forces (IRF), capable of deployment within 3 to 7 days, and Rapid Reaction Forces (RRF), capable of deployment within 7 to 15 days. These forces are to be prepared to operate across the full spectrum of conflict from peace support operations (PSO) to combat operations.”²

Poland contributes twelve MiG-29 NATO-interoperable aircraft as immediate reaction forces (IRF), and one squadron of Su-22 ground attack aircraft for rapid reaction forces (RRF). Plans called for 12 new MRFs by 2002 and buying an additional 48-60 by 2006. This number of MRFs would be enough to provide appropriate pilot training flying time. By comparison, in 1998, Polish MiG-29 and MiG-21 pilots had approximately 40 hours a year and Su-22 crews averaged 60 hours per year. This is significantly less than the NATO standard of 180 hours annually.³ However, after joining NATO, Polish pilots from IRF and RRF units accomplished 120 flying hours per year, which is much better but still below the NATO minimum. We need to try to

accomplish the appropriate number of flying hours because it is the key to matching the experience levels of our Allies.

However, “the dilemma facing the government is whether to update older equipment or go for one of the various offers from Western manufacturers that are on the table.”⁴ If Poland does not buy a new MRF and does not modernize its MiG-29s and Su-22s within 5-6 years, it will not have any serviceable combat planes.⁵ This means Poland must expedite the process of contracting with the Western countries to buy a new MRF.

The question is whether an aircraft upgrade lets the PAADF attain the compatibility and interoperability required to fulfil NATO expectations. According to Maj. Gen. Lech Konopka, the former Chief of Staff of the PAADF,

“When carefully compared, the Western multi-role combat aircraft represented better characteristics in performing all the separate tasks individually than the specialized in the particular task Eastern-made aircraft.”⁶

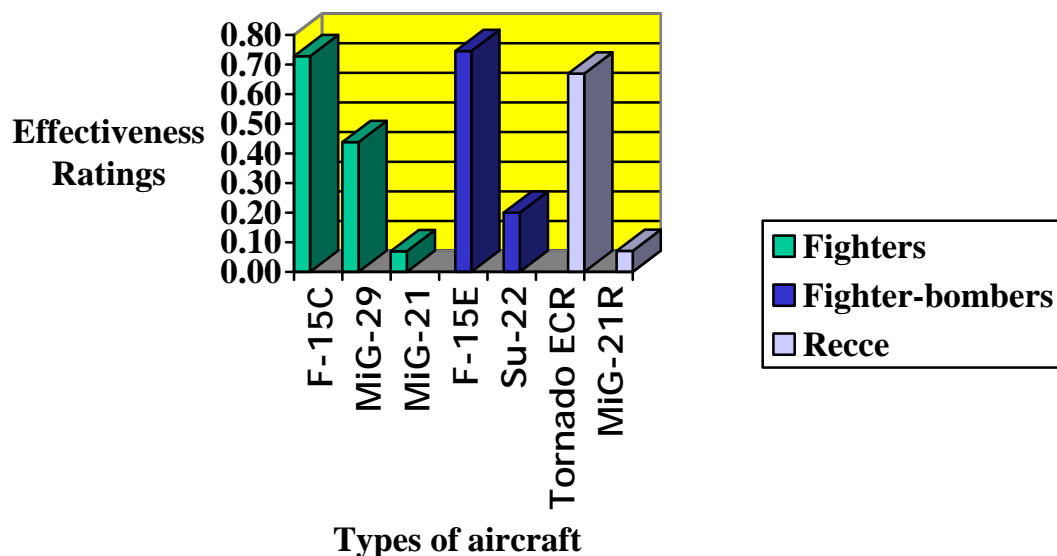


Figure 1 Effectiveness of the Western and Eastern-model aircraft⁷

Figure 1 illustrates the differences in the effectiveness of Western and Eastern-model aircraft where 1.0 is the highest effectiveness rating. Currently, the government is considering MRF options which include the Swedish-British *Saab/BAe* Gripen, *McDonnell Douglas* F/A-18, *Lockheed Martin's* F-16 and French *Dassault's* Mirage 2000-5.⁸ There is little question that it is high time to change the equipment, which is far away from NATO standards and requirements.

New Alliance

Because of the geographic and strategic location of Poland, and the nature of its defense assignments, the PAADF's priority is on upgrading and developing the armed forces as a whole.⁹ By 2002-2003, the 3rd, 6th, 8th, and 10th TAS, presently equipped with MiG-21s, will be virtually without any aircraft. The 9th and 41st TASs, which possess MiG-21BIS, are slightly better off than the other MiG-21 squadrons. These aircraft should remain in service until 2010. However, problems with spare parts, especially engines, can expedite the retirement of the aircraft by 2007.¹⁰ Simultaneously, the situation in fighter-bomber squadrons equipped with Su-22s is not better at all. Around 2002-2003, the 6th and 8th TAS will be dissolved and in two to three years the same situation will face the 7th and 40th TAS.¹¹ This means that 2005-2006 will see the end of Polish strike aviation. A better situation exists in the 1st TAS, which is equipped with MiG-29s. These aircraft should be in service until 2010. However, extensive use of the aircraft in order to meet NATO pilots' flying hours requirements can accelerate the process of retirement of the MiG-29s. Therefore, according to unofficial NATO sources, the PAADF can be treated as fully combat ready only until 2004.¹²

Unfortunately, there is a lot of evidence that a new aircraft will not arrive in Poland for a long time. The Polish MOD is supposed to modernize the fighters and fighters-bombers.¹³ Originally, based on the planned *Armed Forces 2012*, the Minister of Defense, Stanislaw Dobrzanski, suggested delivery of about 150 aircraft in two stages: half to be delivered until 2007 and the second half through 2012. Payment was supposed to be divided into the same two stages.¹⁴ However, Poland's new government and its new Minister of Defense, Bronislaw Komorowski, considered a different option of 60 MRFs for PAADF. During the first phase, Poland would buy second-hand fighters (16 aircraft) from one of the concerns taking part in the MRF tender. The second phase would include the remaining 44 fighters until 2006, which would be new aircraft.¹⁵

The problem the new government has to face is the decreasing number of serviceable aircraft, which directly influences Polish security matters and their Alliance role. At the end of 1995, the PAADF possessed 397 combat aircraft, including 245 fighters (45 two-seaters), 111 fighter-bombers (18 two-seaters), and 23 reconnaissance aircraft. This created a force comprised of 65% fighters, 30% fighter-bombers, and 5% reconnaissance aircraft. Moreover, at the end of 1997, Poland had 223 fighters (MiG-21, 23, 29) and 99 fighter-bombers (Su-22) which totalled 322 combat aircraft.¹⁶ However, in 1999, the 28th Fighter Regiment with MiG-23s was dissolved and a lack of spare parts for the MiG-21 further decreased the number of serviceable aircraft available for the Polish Air Defense System. This decreasing number of serviceable aircraft forces Poland to expedite the MRF decision.

A new option for Poland has recently emerged during 2002 as the German government has offered to sell its 23 MiG-29s to Poland.¹⁷ The MiG-29 is a really good

fighter, but it has a short range. The aircraft does not possess air to air refueling (AAR) capabilities, which restrict its operation to Polish territory, close to its airbases. The only other option for using MiG-29s in NATO operations is for Quick Reaction Alert duty. However, other NATO aircraft can also fulfill this duty. Because of these facts, it would be very hard to use the aircraft in offensive counter air operations like sweep, detached, or close escort. The limited flying time does not allow the aircraft to be integrated into package flights. There is an option for using the aircraft in Mixed Fighter Force Operations, but, again, the lack of AAR capabilities could limit the aircraft flying time behind the FLOT.

The East Germans did successfully use the aircraft after rejoining West Germany. The German MiGs have two additional external tanks that extend their flying time to almost three hours. However, it decreases their combat capabilities because the aircraft are not able to carry semi-active air to air missiles (AAM). Moreover, only 8 aircraft are upgraded to this version and the rest of the aircraft require a major overhaul, which will cost Poland money.

Another necessity is to convert a squadron for these new MiGs. The only squadron equipped with Fulcrums and pilots who are able to do the conversion is in Minsk Mazowiecki, the 1st Tactical Air Squadron. Based on current projections, they will need about 2 years (optimistic vision) to do the conversion. Moreover, the 1st TAS already has other taskings. Most of the instructors are included in the top 12 pilots of the NATO group. Current tasks and training will be affected by attempting to convert the squadron to the MiG-29s.

Another argument against the Fulcrums is that Poland wants to take over the MiGs in 2002, but the German government wants to postpone the deal until June 2003.¹⁸ The Germans want to postpone the deal until they replace the MiG-29 squadron with a Eurofighter squadron. With this delay, the converted squadron will be able to attain operational readiness only around 2004, or even as late as 2005. As a result, the MiG-29s will be operational only until 2010, giving Poland only 5 to 6 years of service in the PAADF. Simultaneously, the German MiG-29s need major overhaul that will cost more money. In addition to that, we still have some problems with our Russian suppliers over spare parts.

Spare part delays for several months cost Poland delays in their training programs. Janusz Zemke, Vice Minister of Defense, said the program of buying a new aircraft would proceed simultaneously with the Fulcrum purchase and first aircraft delivery should be expected by 2005.¹⁹ Because of that, the question has emerged in the press whether Poland really needs the German MiG-29s when it is going to buy the MRF? According to Maj. Gen. Lech Konopka, the aircraft, must fulfil a broad spectrum of tasks:

- Fighting for air superiority, both offensive and defensive counter air;
- Air interdiction;
- Close air support;
- Tactical air support for maritime operations;
- Air reconnaissance.²⁰

Based on these tasking, the MiG-29 is not able to cover this broad spectrum of missions because it is a highly specialized fighter, not a MRF.

The next problem is a financial one. The Minister of Defense says that within the years 2002-2006, the annual MOD budget should be at least 1.95% of GDP with the amount rising from 16.1 billion zlotych to 20.2 billion zlotych in 2006.²¹ It is an optimistic budget, but Poland has so far not considered buying the additional MiG-29s and will have to find money to pay for that while simultaneously continuing to buy a new MRF. The typical combat aircraft today costs \$20-30 million per piece.²² As the PAADF needs 60 new MRF, the total cost would be between \$2.5-3.5 billion.²³

However, Poland currently has a few economic problems. A new government created after the 2001 election has to face these problems. The Polish budget has a deficit of 40 billion zlotych²⁴ and the new government is trying to fill the gap.²⁵ Thus, the Polish government might have problems allocating \$3 billion for the MRF when the whole of Polish society is looking carefully at what the government is doing.²⁶ Because of this fact, buying a new aircraft is getting to be very problematic for economic reasons.

Poland is also interested in buying the future joint strike fighter (JSF), at least according to the politicians' declarations.²⁷ In the latest news (interview with the Commander in Chief of PAADF, Lt. Gen. Andrzej Duleba), the F-16 successor would be the JSF.²⁸ Thus, if Poland is really interested in that option, it makes more sense to buy a new MRF, like the F-16 and not to look for the other option of the German MiG-29s. Involvement in the German MiG-29s option is therefore a waste of time and a waste of the most important thing--money. Poland cannot afford to buy the MiGs and the new MRF simultaneously. Additionally, if Poland buys the Fulcrums, the decision for a new MRF matter will probably be postponed. Poland must look at its primary requirement, which is fulfilling the alliance pact instead of looking for cheap, but short-term, solutions.

Poland must maintain a long-term view. Sooner or later, Poland will have to change the aircraft depot for the MRF.

Poland should also not postpone the MRF decision because of timing. According to one of the options, Poland is supposed to take 16 second-hand F-16s followed by 44 new ones. A disadvantage of this would be that delivery of the first second-hand aircraft from the Davis Monthan Air Base Aerospace Maintenance and Regeneration Center (AMARAC) would only be possible 22 months after the program starts.²⁹

For compatibility reasons, the winner of the competition should be the F-16C/D. Four European countries still possess the F-16 and have almost accomplished their Middle Life Upgrade (MLU) program. American air participation in this past decade's wars and conflicts, like DESERT STORM or ALLIED FORCE, was at least half or more of the forces involved in the operations. An added bonus is recent news is that the U.S. wants to assist the Polish aviation industry in building the JSF fighter. This would be a tremendous opportunity to develop the Polish aviation industry. Later, Poland would have also preference in buying the JSF.³⁰

Poland has to expedite modernization of its Air Forces, but it needs a long-term approach. This means Poland should think ahead and try to find the best solution. The next MiG-29 delivery does not change anything in Polish security and does not significantly improve its Air Force capabilities because of the delivery, conversion, and major overhaul time requirements. A long-term solution is not only a few years ahead, but decades ahead. Thus, buying the F-16 and then the JSF weapon platform would give Poland a really long-term approach and meet NATO requirements and obligations. Poland needs a multi-role aircraft in the near-term, so the only viable solution is to buy F-

16s C/D. Immediate delivery of aircraft is not everything. Time is needed to prepare the operators of the platform like pilots and maintenance personnel. Based on the aircraft's limitations and resupply problems, the Germans' MiG-29s can not fulfil Poland's expectations and is a short-term solution at best. Moreover, spare parts for our existing aircraft are an increasing problem because of lack of reliability of Eastern suppliers. Finally, additional delays and renegotiations with NATO will probably discredit the Polish Government in our Allies' eyes.³¹

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Chapter 5

Conclusion

The break-up of the Soviet Union and Gorbachev's declaration of an end to the Cold War gave countries such as Poland, the Czech Republic, and Hungary an opportunity to create their own visions of security matters. Poland, as a new democracy, saw membership in NATO as a way to guarantee the security of Polish sovereignty. In 1992, Poland's membership in the NATO was declared to be a strategic goal of Polish security policy. In 1990 and again in 1992, the Committee of State Defense published two major documents embodying changes to Polish defense doctrine. The two documents provided the first revision effort of the post-Cold War era and a new point of view on the security considerations of the new political order. Chief among these priorities is meeting NATO membership requirements and obligations.

As this paper has argued, Poland must take immediate action to fulfil its requirements for NATO membership. The Polish C2 System must be an integral part of the NATO C2 System. Thus, Poland should create the COP that will exercise TACON over air assets and will be able to exercise command and control over attached assets to accomplish the mission. The COP will issue ATOs and virtually make all decisions for employ air assets. Hence, the TAB's role would be important during peacetime, something akin to the American concept of ADCON. Therefore, the TAB staffs should

reinforce the C2 System Posts and would not exist in the C2 System during crisis and/or wartime. Moreover, after the ODNs achieve operational readiness, the Corps level of command and control, i.e. ADC would be abolished.¹ Therefore, the ATO should be issued directly from COP-CAOC to SOC, and ODN-CRC (Appendix E). This solution would let Poland meet NATO expectations and obligations and achieve complete compatibility and interoperability. To summarize, the future Polish Command and Control System must be an integral part of the NATO Command and Control System. The system and procedures must be the same among all alliance members. For that reason, the Polish C2 System must reorganize to meet NATO requirements, expectations, and obligations.

Poland also has to expedite modernization of its Air Forces, but it needs a long-term approach. This means Poland should think ahead and try to find the best solution. The next MiG-29 delivery does not change anything in Polish security and does not significantly improve its Air Force capabilities because of the delivery, conversion, and major overhaul time requirements. A long-term solution is not only a few years ahead, but decades ahead. Thus, buying the F-16 and then the JSF weapon platform would give Poland a really long-term approach to meet NATO requirements and obligations. Poland needs a multi-role aircraft in the near-term, so the only viable solution is to buy F-16s C/D. Immediate delivery of aircraft is not everything. Time is needed to prepare the operators of the platform like pilots and maintenance personnel, which, of course, takes, time. Based on the aircraft's limitations and resupply problems, the Germans' MiG-29s can not fulfil Poland's expectations and is a short-term solution at best. Moreover, spare parts for our existing aircraft are an increasing problem because of lack of reliability of

Eastern suppliers. Finally, additional delays and renegotiations with NATO will probably discredit the Polish Government in our Allies' eyes.²

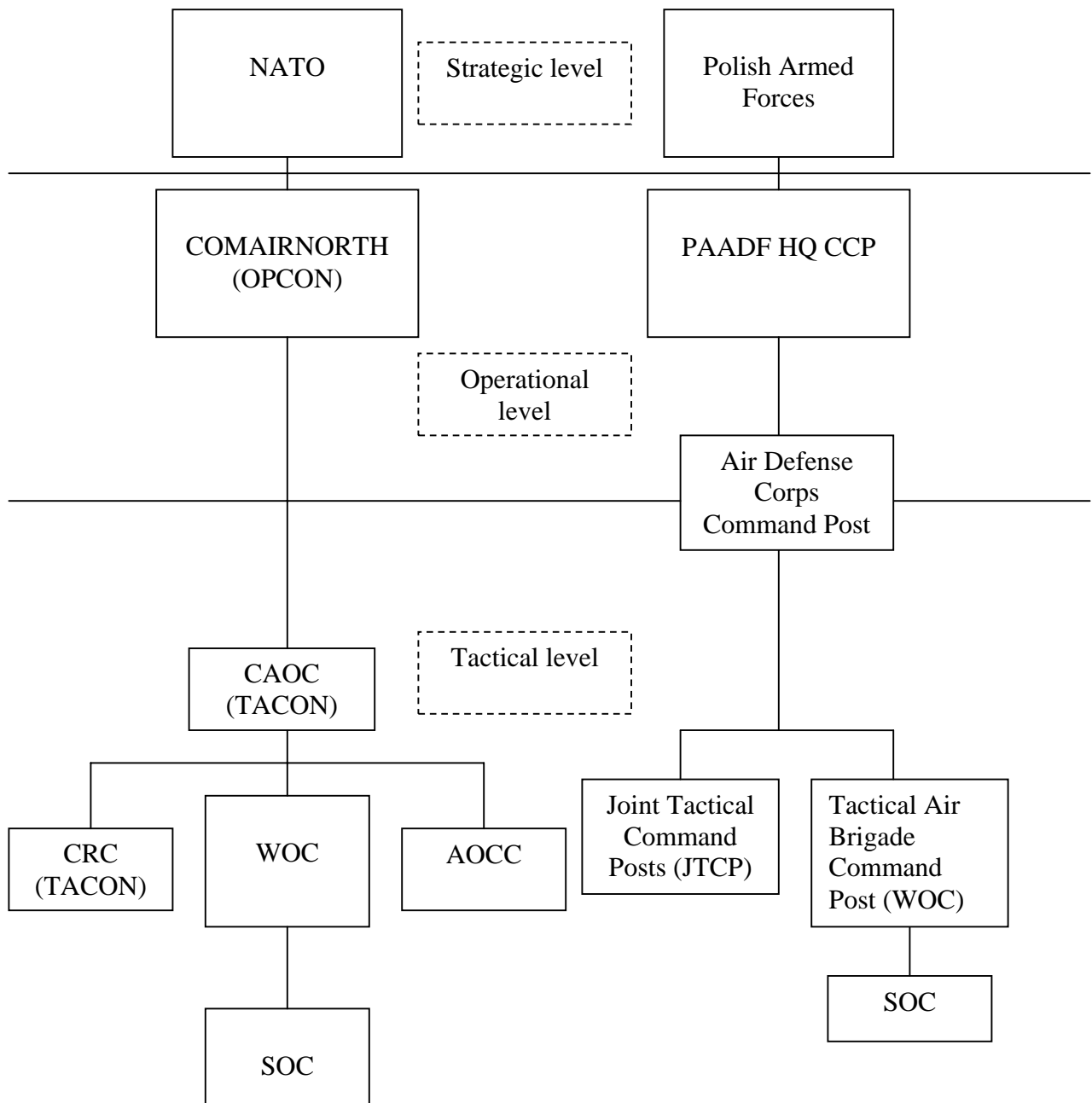
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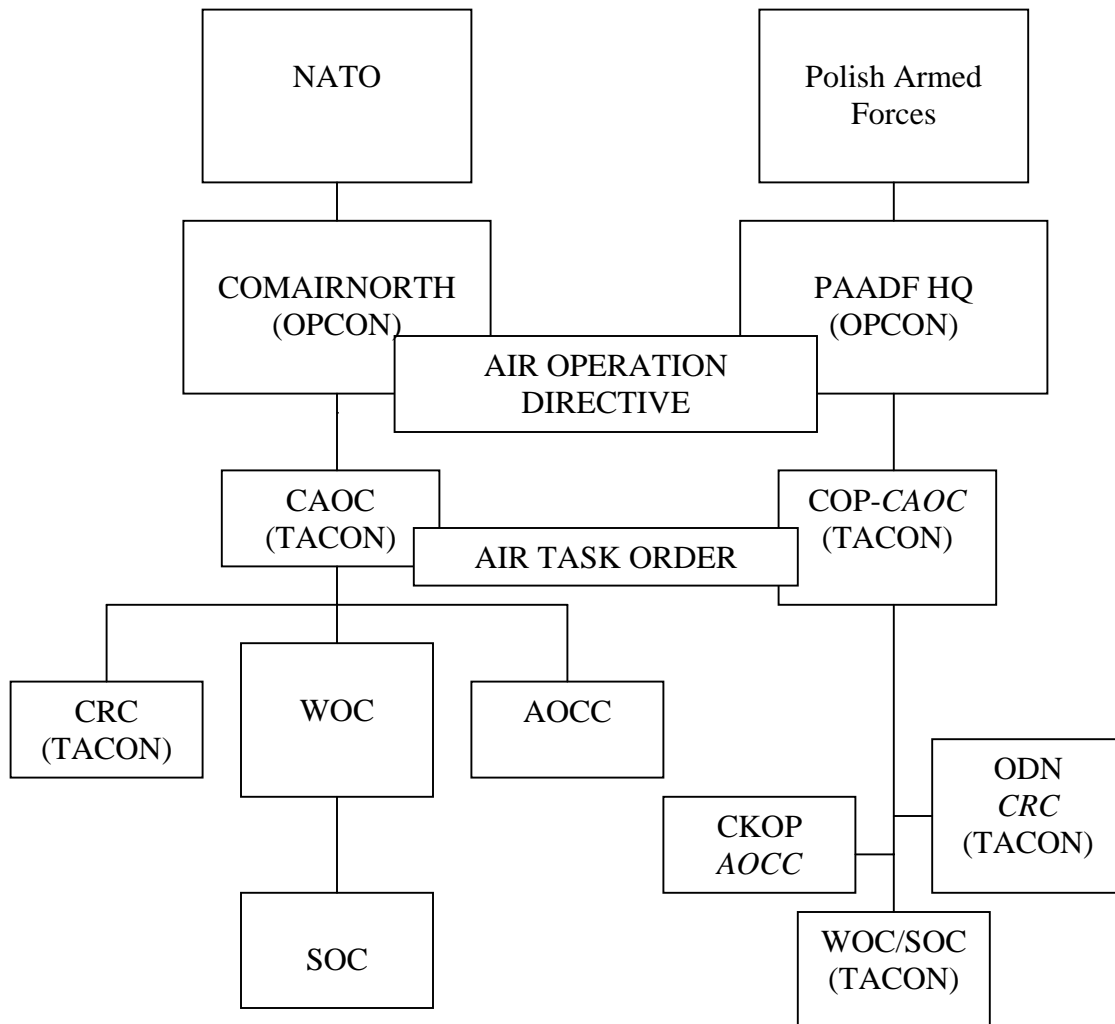
Appendix A

Comparison of Command and Control Levels



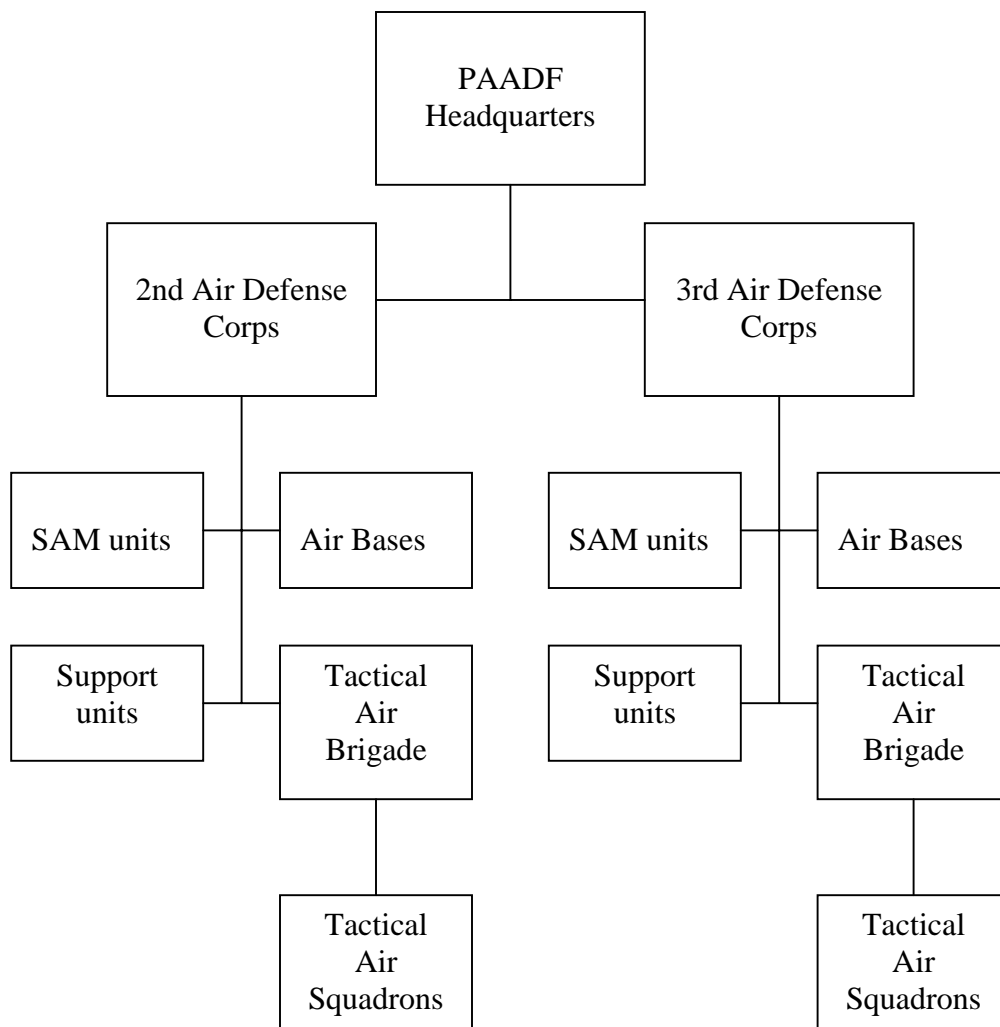
Appendix B

Proposed Command and Control System



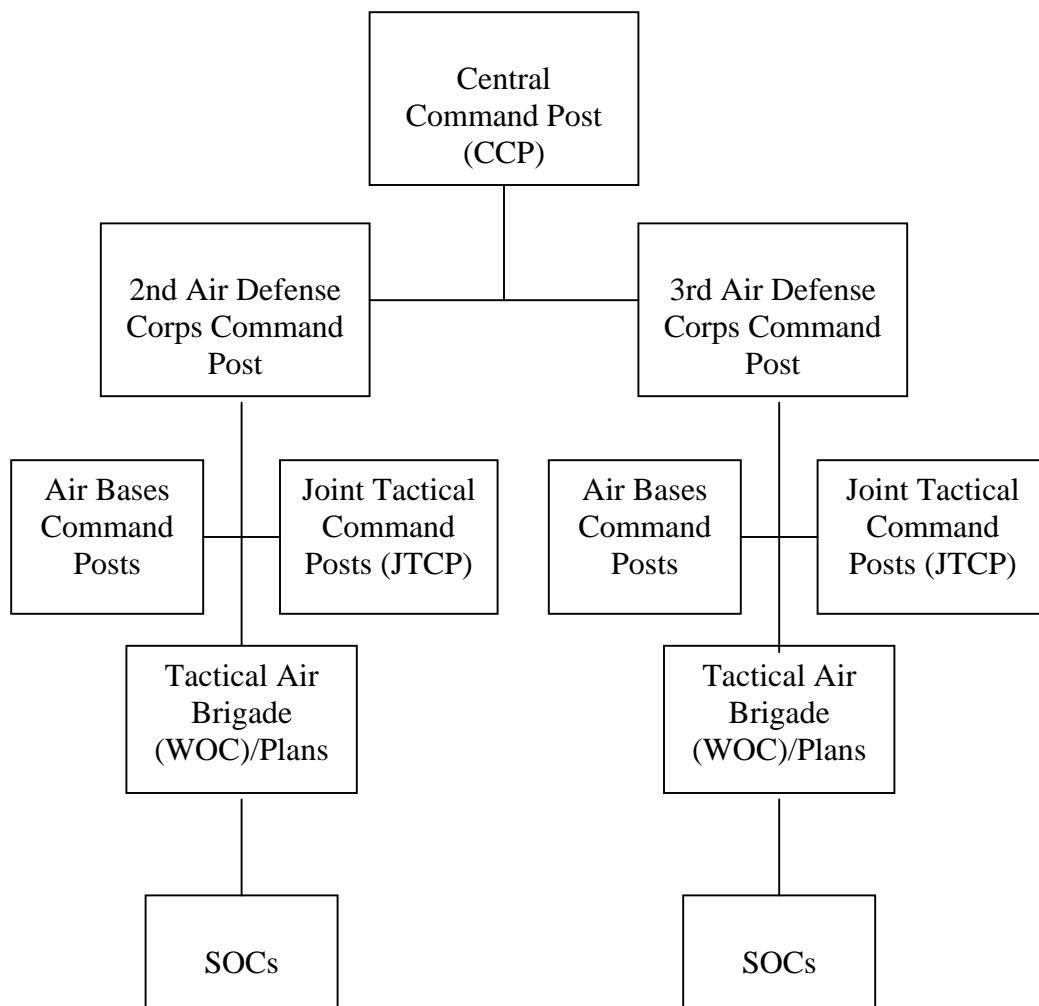
Appendix C

Current Polish Air and Air Defense Organizational Structure



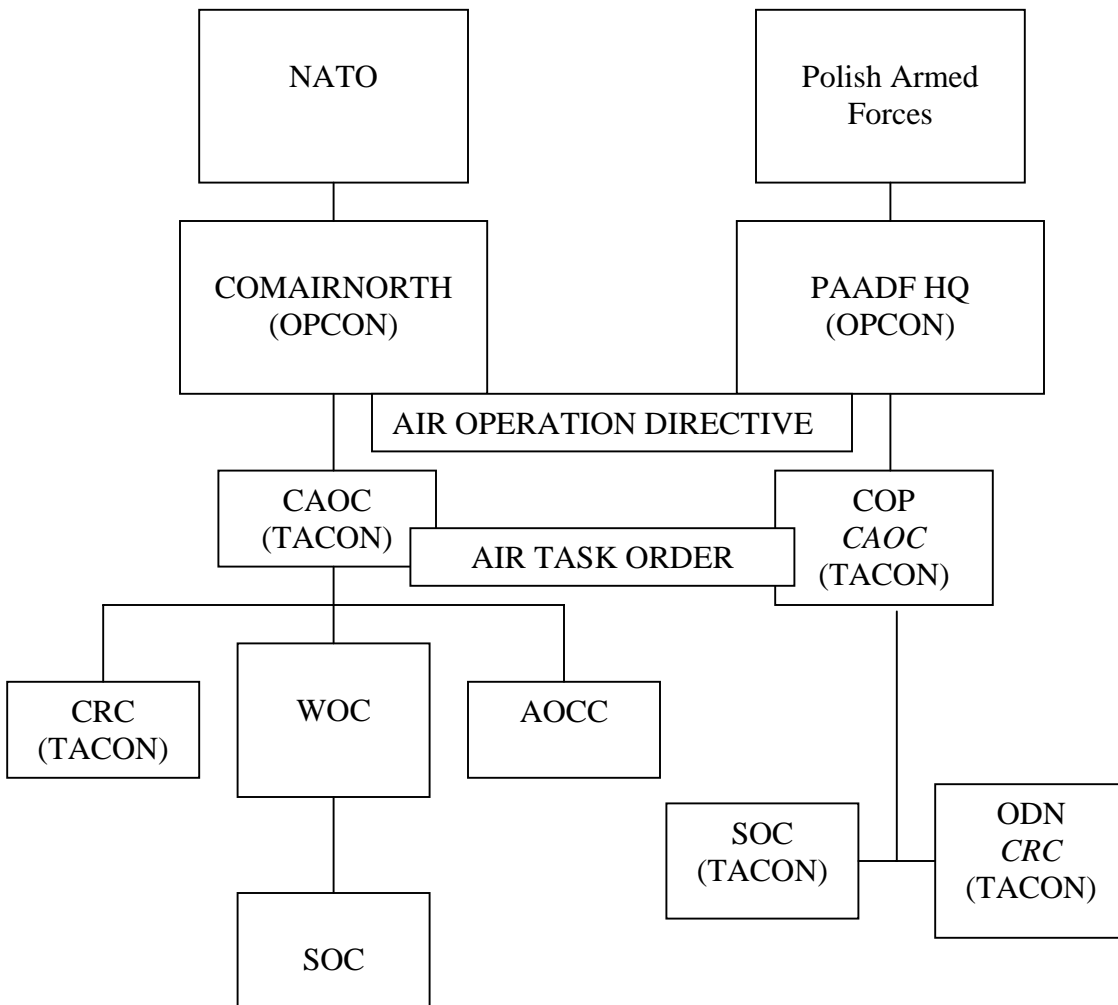
Appendix D

Current Command and Control System



Appendix E

Suggested Command and Control System



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